

Appln. No. 10/765,606
Amendment dated May 22, 2006
Reply to Office Action mailed January 17, 2006

REMARKS

Reconsideration is respectfully requested.

Claims 1 through 20 remain in this application. No claims have been cancelled, withdrawn, or added.

The Examiner's rejections will be considered in the order of their occurrence in the Office Action.

Paragraph 1 of the Office Action

The drawings were objected to under 37 CFR 1.83(a) as not showing every feature of the invention specified in the claims.

Figure 6 has been added (and the specification correspondingly amended) to depict a controller located in the peripheral device. Specifically, in Figure 6, which closely parallels Figure 5 except that the controller 530 is shown outside of the host 110 and the peripheral device 130 in Figure 5, and in Figure 6 the controller 530 is shown internal to host 110 and peripheral 130, as described in the specification at page 13, lines 24 through 26.

Withdrawal of the objection to the drawings is respectfully requested.

Paragraph 2 of the Office Action

Figure 1 was objected to because the legend --Prior Art-- was not indicated on the sheet.

Figure 1 has been amended to include the legend "PRIOR ART". It is submitted that this change satisfies the requirement in the Office Action that drawing Figure 1 include the legend "PRIOR ART".

Withdrawal of the objection to the drawings is respectfully requested.

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Paragraph 3 of the Office Action

Claims 1 through 20 have been objected to for the informalities noted in the Office Action.

It is submitted that the recitation of the claims, including the changes to the claims set forth above, are clear as to what is referred to in the body of the claims. The reference to "controller" in the last clause is made to the "controller" set forth by the entirety of claims 1, 5, and 17, and not to the "interface controller" that is consistently referred to as such in the body of the claim. Claims 9 and 13 have been amended to clarify the reference to the claimed apparatus as a whole, which is consistent with claims 1, 5, and 17.

Withdrawal of the objection to claims 1 through 20 is therefore respectfully requested.

Paragraphs 4 and 5 of the Office Action

Claims 1 through 20 were objected to under 35 U.S.C. §112, second paragraph, as being indefinite.

Looking to claim 1 as an example, the cited portion of the claim states (numbering and emphasis added):

wherein [1] the controller, in connection with information associated with the data communications received from the power line interface directed to the peripheral device, is configured to appear to the peripheral device as the host in accordance with the protocol and wherein [2] the power supply supplies power to the second data communications interface in accordance with the protocol such that the second data communications interface is fully compliant with the protocol

It is submitted that the language of the claims clearly sets forth the two aspects in which the claimed invention is compliant with the protocol, and the numbering above emphasizes these aspects. It is therefore submitted that the claims are clear as to the aspects of compliance, but further

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information is supplied in the specification at paragraph [0020], lines 6 through 9, and paragraph [0021], lines 23 et seq.

Withdrawal of the §112 rejection of claims 1 through 20 is therefore respectfully requested.

Paragraph 6 and 7 of the Office Action

Claims 1 through 20 have been rejected under 35 U.S.C. Section 103(a) as being unpatentable over Kolbet in view of the alleged Applicant Admitted Prior Art.

Claim 1 requires, in part, "a power line interface capable of providing a first data communications interface between the peripheral device and the host over the power line". Similarly, claim 5 requires "a power line interface configured to provide a first data communications interface between the host and the peripheral device over the power line". Claim 9 requires "a power line interface configured to provide a first data communications interface between the peripheral device and the host over the power line". Claim 13 requires "a power line interface capable of providing a first data communications interface between the host and the peripheral device over the power line". Claim 17 requires "a power line interface capable of providing a first data communications interface for the data communications between the controller and one of: the host when the controller is located in the peripheral device, and the peripheral device when the controller is located in the host, over the power line using a wall plug capable of electrically connecting to the power line".

It is alleged in the rejection of the Office Action that:

Regarding claim 1, Kolbet et al. disclose ...a power line interface (66) capable of providing a first data communications interface between the peripheral device and the host over the line (figure 1);

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However, it is submitted that the "conventional power supply circuit 66" of the Kolbet system cited in the rejection does not meet the requirements of the power line interface of the claims. More specifically, the language of the claims requires that the power line interface be "capable of providing a first data communications interface" or be "configured to provide a first data communications interface". The "conventional power supply circuit 66" of Kolbet is incapable of "providing a first data communications interface" "over the power line". The Kolbet reference describes the "conventional power supply circuit 66" in the following manner at col. 6, lines 19 through 52:

A conventional power supply circuit 64 (66), for example, comprises the 24v DC input terminal VIN, an oscillator formed of NAND gates U14 and a transistor Q1 to effect AC, a step down transformer T2, a rectifier of two diodes D3, D4, an LC filter L1, C2, and a voltage regulator U3 to provide a 5 volt output for signal pulses and device power. A reset signal PTOR_N<=0 ("active low") is provided from a Schmitt trigger U13 timed with capacitor C3 and resistor R40 for pullup via terminal PTOR when full voltage is reached after power is turned on. If a peripheral unit needs power, it is supplied through the power wire pair in the USB cable between the peripheral and the power supply terminals +5v and ground in the nearby extender port. The power wire pair in the USB cable from the host then is not needed.

It is believed that nothing in this description of the element 66 of the Kolbet system discloses to one of ordinary skill in the art that the "power supply circuit" has any capability to provide a first data communications interface, particularly over a power line between a peripheral device and a host. As this power supply circuit is simply a conventional power supply circuit that is used to provide power on a USB bus, as is confirmed by the Kolbet patent at col. 6, lines 8 through 19, where it is stated that:

One pair of wires in a USB cable normally carries power which, in a typical configuration, provides power from the host to the peripheral. Power for the extender ports may be received in the same manner from one or both of the computer units. However, in most present computers this has a low voltage of either 5 volts or 3.3 volts, according to specifications, that is used for the data signals. This may be insufficient for extended cables having significant resistance and

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IR power loss. Therefore, a separate power source is desirable to provide a sufficiently higher voltage for transmission. This may be any conventional or other desired AC or DC power supply with appropriate output.

Therefore, it is submitted that one of ordinary skill in the art would not be led to the claimed power line interface.

Further, it is noted that element 28 of Kolbet, the "means for connecting" of the "second extender port 30", is not "configured to connect the peripheral device with the host *over the power line interface* using the first data communications interface and a second data communications interface coupled to the interface controller and the peripheral device and having a protocol associated with the data communications" as further required by claim 1 (as well as many of the other independent claims).

Further, it is alleged in the rejection of the Office Action that:

Kolbet et al. disclose claimed invention except for the system capable of engaging in data communicating over a power line. AAPA teaches that a peripheral device (110) using power line (232) capable in data communication with a host device (110, figure 2). It would have been obvious to a person having ordinary skill in the art at the time the invention was made to use the power line communication as taught by AAPA in the system as disclosed by Kolbet et al. for the purpose of providing data communications between two devices located remotely from each other using power line communication to enable those two devices connected together through the power line.

This statement merely amounts to a bare allegation that one of ordinary skill in the art would be motivated to combine the HomePlug Powerline system with the Kolbet system, without stating any motivation for making such a combination. The Kolbet patent is primarily focused on a system for extending the range of a USB connection, and claims that its system achieves an extended range of up to 100 meters or even 830 meters. Nothing in the Kolbet patent suggests to one of ordinary skill in the art that there is a need to apply the HomePlug Powerline system to the Kolbet system to increase this extension distance, or that the HomePlug Powerline

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system is even able support those extended distances. The Kolbet system employs Cat5 cable comprised of twisted pairs of wires to support the distance extension, and nothing suggests that conventional power line conductors are able to support such extension using non-twisted pair lines.

It is therefore submitted that the cited patents, and especially the allegedly obvious combination of Kolbet and the alleged Applicant Admitted Prior Art set forth in the rejection of the Office Action, would not lead one skilled in the art to the applicant's invention as required by claims 1, 5, 9, 13, and 17.

Withdrawal of the §103(a) rejection of claims 1 through 20 is therefore respectfully requested.

CONCLUSION

In light of the foregoing amendments and remarks, early reconsideration and allowance of this application are most courteously solicited.

Respectfully submitted,

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